METHOD AND APPARATUS FOR ALLOCATING DOWNLINK RESOURCES IN A MULTIPLE-INPUT MULTIPLE-OUTPUT (MIMO) COMMUNICATION SYSTEM

ABSTRACT

Techniques to schedule downlink data transmission to a number of terminals in a wireless communication system. In one method, one or more sets of terminals are formed for possible data transmission, with each set including a unique combination of one or more terminals and corresponding to a hypothesis to be evaluated. One or more sub-hypotheses may further be formed for each hypothesis, with each sub-hypothesis corresponding to specific assignments of a number of transmit antennas to the one or more terminals in the hypothesis. The performance of each sub-hypothesis is then evaluated, and one of the evaluated sub-hypotheses is selected based on their performance. The terminal(s) in the selected sub-hypothesis are then scheduled for data transmission, and data is thereafter coded, modulated, and transmitted to each scheduled terminal from one or more transmit antennas assigned to the terminal.